

REMARKS

In the Office Action mailed January 5, 2007, claims 1, 5, 9, 17 and 19 were objected to because of informalities. Claims 1-16 and 19-22 were rejected under 35 U.S.C. 102(b).

Objection of claims 1, 5, 9, 17 and 19

Claims 1, 5, 9, 17 and 19 were objected to because of informalities regarding "a" and "said". In response, claims 1, 5, 17 and 19 have been amended. Further guidance regarding the informality of claim 9 is requested.

Claim 19 was also objected to because certain limitations were repeated. The Examiner is thanked for the helpful suggestions. In response, claim 19 has been amended to delete the repeated limitations.

No new matter is introduced by any amendment, and all amendments are supported by the application as filed. The amendments are made merely to clarify the claims.

102(b) rejection

In the Office Action mailed January 5, 2007, claims 1-16 and 19-22 were rejected under 35 U.S.C. 102(b) over Dohmeier (5491682). The Office Action stated

Dohmeier et al. show in Fig. 4 a laser scattering system having reduced noise comprising:
a multi-line (multi-wavelength) laser cavity 150 (laser diode with multi-wavelength) (as evidence by Ban et al (4843031) in Abstract) having output along a laser beam axis;
an output coupler coupled to one end of the laser cavity along the laser beam axis (note that it is inherent that a laser cavity must have an output coupler in order to output the laser beam);
a compensating optic (152) (col. 11, l.63-65 disclose different well-known configurations of optical components for directing a radiation beam, meaning the compensating optic may be used) in optical communication with the output coupler;

an output signal (monitor signal) 156 in optical communication with the compensating optic;
a gain adjusting element 166 in electrical communication with the output detector;
a scattered light detector 158 (desired/scattered signal) at a selected angle away from the laser beam axis;
a differencing junction 162 in electrical communication with the gain adjusting element and in electrical communication with the scattered light detector (col. 3, l.39-63, col.11, l.59-67, and col. 12, l.1-67).

In order for a reference to be an anticipating reference, all elements of the claimed invention must be shown. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). (cited in MPEP 2131).

To assist in the discussion of the rejection, applicant respectfully provides an overview of some of the important features of the invention. The invention is not simply a method of using a portion of a light beam as a reference and using that portion to cancel noise in the remaining portion of the light beam which generates a signal. Any system that does this will necessarily have many elements in common with other systems that perform this function. Rather, the invention here is a method for reducing noise from the laser amplitude fluctuations in a multi-line laser system by performing spectral matching. These features are required in all claims of the current invention. As described in the specification and claims, spectral matching is used to match the spectral (wavelength) content of the desired signal and the laser source. (specification, page 3-4).

Dohmeier is directed to reducing noise in a data signal read from an optical recording medium, such as a laser diode used to read recorded data from compact disks (Dohmeier, column 1, lines 26-31). Dohmeier is simply a power subtraction, using a variable gain circuit.

Several elements of the rejected claims are not found in Dohmeier. Dohmeier does not use a multi-line laser. The Office Action states laser cavity 150 is multi-line. However, no multi-line laser sources are mentioned or suggested. The Office Action does not direct applicant to any specific portion of the reference for support that laser cavity 150 is multi-line, but states another reference (Ban, 4843031, abstract) provides evidence that a laser diode is multi-wavelength. Ban is directed to a method of fabricating a "compound semiconductor device which is capable of forming a multi-wavelength semiconductor laser structure." The laser in Ban is extremely specialized and reportedly requires illumination during the epitaxial growth process. It is not seen how Ban is relevant to the present invention.

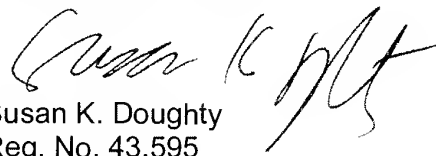
In any event, Dohmeier does not include a spectral matching element. The Office Action does not state which element of Dohmeier is supposed to provide this feature, except for stating "compensating optic (152)" is a focus optic and a Rayleigh optic. Optic 152 is not referred to in Dohmeier as a "compensating optic", but rather "radiation beam application means", col. 13, line 63. Optic 152 is used in Dohmeier to direct the radiation beam to an optical storage medium. This is irrelevant to the spectral matching element required by the current claims. In addition, the word "Rayleigh" is not found in Dohmeier. The description of Rayleigh optics in the current specification on page 5, line 19 describes spectral shaping. There is no spectral shaping provided or suggested by optic 152 any other component of the Dohmeier system.

Because all elements of the current claims are not provided in Dohmeier, reconsideration and withdrawal of the rejection is respectfully requested.

CONCLUSION

This response is accompanied by a Petition for Extension of Time. Please deduct the amount due, believed to be \$225.00, for the extension of time for a small entity from Deposit Account 07-1969. If this amount is incorrect, please credit any overpayment or deduct the appropriate fee from Deposit Account 07-1969.

Respectfully submitted,


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